

## *Amazilolepis trinidadensis* gen. n., sp. n. (Cestoidea: Hymenolepididae) from the Copper-rumped Hummingbird, *Amazilia tobaci*, in Trinidad, West Indies

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**ABSTRACT:** *Amazilolepis trinidadensis* gen. n., sp. n. (Cestoidea: Hymenolepididae) is described from the small intestine of the copper-rumped hummingbird, *Amazilia tobaci*, from Trinidad, West Indies. The new genus differs from all unarmed cestode members of genera in Hymenolepididae found in mammals by having the vagina anterior to the cirrus sac. Of the 3 genera of Hymenolepididae whose members lack a rostellum and are found in birds, it is closest in morphology to *Woodlandia* Yamaguti, 1959. It differs from *Woodlandia* in arrangement and location of testes, ovary shape and placement, as well as host. *Woodlandia* is found in Peli-caniformes.

**KEY WORDS:** Cestoidea, *Amazilolepis trinidadensis*, Hymenolepididae, copper-rumped hummingbird, *Amazilia tobaci*, Trinidad, West Indies.

For several years the Caribbean Institute of Epidemiology, Trinidad, W.I., collected hundreds of birds to sample blood for viruses. After bleeding, the carcasses were frozen. Among them were 2 copper-rumped hummingbirds, *Amazilia tobaci* (Gmelin, 1788), from Port-of-Spain. Both were infected with tapeworms representing a new genus and species that are described here.

### Materials and Methods

Birds were collected in a mist-net, bled, and frozen. After thawing and dissection, the worms were fixed in AFA, stained in Semichon's carmine, and mounted in Canada balsam. The following description is based on 3 nearly complete specimens and several fragments. All measurements are in micrometers unless otherwise indicated.

### *Amazilolepis* gen. n.

**GENERIC DIAGNOSIS:** Hymenolepidinae Perrier, 1897. Rostellum on apical organ absent, suckers weak, unarmed. Neck present. Proglottids numerous, wider than long. Genital pores unilateral. Protandry marked; testes disappear before ovary appears. Testes 3, in transverse row, internal to osmoregulatory canals. Cirrus pouch nearly reaches median field, containing small seminal vesicle. External seminal vesicle large, filling at about same time ovary appears. Cirrus unarmed. Vagina opens to genital atrium anterior to cirrus sac. Ovary oval, antiporal. Vitellarium round to oval, slightly poral to ovary.

Uterus a simple transverse sac, filling most of gravid proglottid. Parasites of hummingbirds.

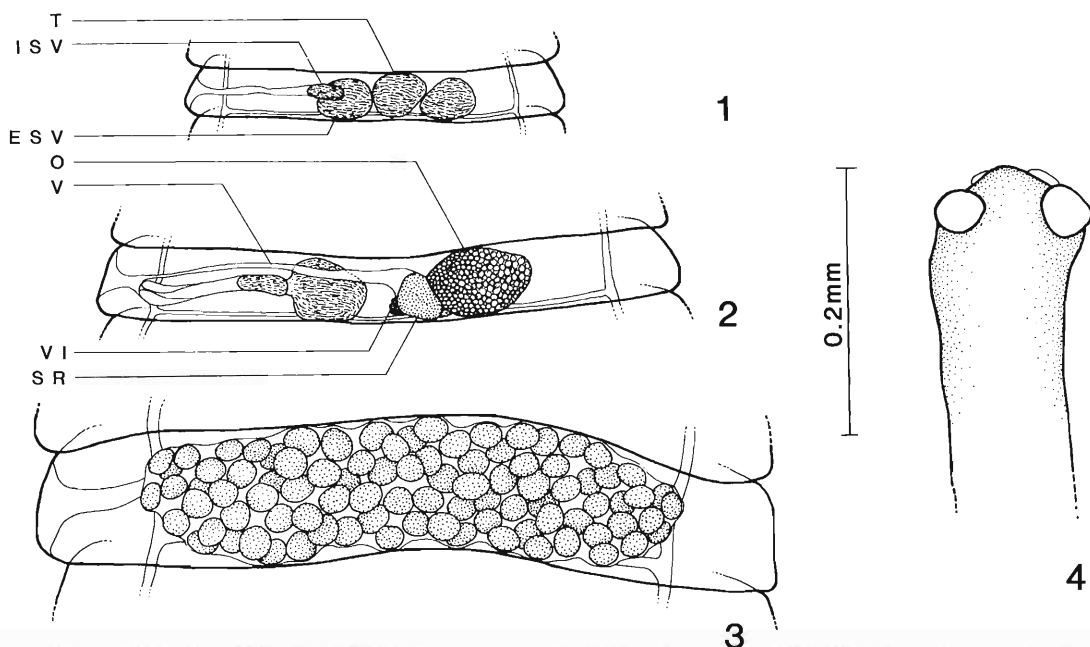
### *Amazilolepis trinidadensis* sp. n. (Figs. 1–4)

**SPECIFIC DESCRIPTION:** Strobila 20–40 mm long, 560–600 in greatest width when gravid. Proglottids craspedote (Figs. 1–3): Mature proglottids (male) 40–45 long, 280–300 wide, (female) 45–50 long, 300–320 wide. Gravid proglottids 106–120 long, 545–600 wide. Scolex (Fig. 4) 200 long, 135 in greatest width. Neck about 2.5 mm long. Suckers rounded, 54 × 40. Genital pores unilateral, about equatorial in mature proglottids. Genital ducts pass dorsal to osmoregulatory canals. Genital atrium 13–18 deep, 7–10 wide. Male reproduction system matures before female system.

**Male genitalia:** Testes, 3, in transverse row, 3–35 long by 45–50 wide in mature segments. Cirrus sac elongate, oval, 90–100 long, 10–15 in greatest width. Cirrus small, unarmed. Internal seminal vesicle present, 40–55 long, 10–15 wide, vas deferens expanded into external seminal vesicle, 80–90 long, 55–60 wide.

**Female genitalia:** Ovary ovoid, aporal, 57–65 wide, 47–65 long. Vitellarium round, slightly poral to ovary, 26–35 wide, 28–41 long. Vagina anterior to cirrus sac. Seminal receptacle elongate, 70 long by 40 wide. Uterus forms a transverse, irregular sac, overlapping osmoregulatory canals. Eggs thin shelled, 24–26 wide. Onchosphere hooks 12–14 long.

<sup>3</sup> Deceased 17 October 1990.



Figures 1-4. *Amazilolepis trinidadensis* gen. n., sp. n. 1. Male mature proglottid. 2. Female mature proglottid. 3. Gravid proglottid. 4. Scolex. All figures drawn to same scale. Abbreviations: ESV, external seminal vesicle; ISV, internal seminal vesicle; O, ovary; SR, seminal receptacle; T, testes; V, vagina; VI, vitellarium.

### Taxonomic summary

TYPE AND ONLY SPECIES: *A. trinidadensis* sp. n.

REMARKS: *Amazilolepis* differs from all the unarmed genera found in mammals, *Gvosdilepis* Spasskii, 1953, *Mathevolepis* Spasskii, 1948, *Soricina* Spasskii et Spasskaja, 1954, *Mytolepis* Spasskii, 1954, *Cryptocotylepis* Skrjabin et Mathevossian, 1948, *Insectivorolepis* Zarnowski, 1956, and *Hymenolepis* Weinland, 1858, in having the vagina anterior to the cirrus sac. It differs from the 3 genera of Hymenolepidinae that lack a rostellum which are found in birds by the following: *Amphipetrovia* Spasskii et Spasskaja, 1954, has the testes antiporal to the ovary; *Arhynchotaeniella* Saakova, 1958, where the vagina has a distal sclerotized clamp; and *Woodlandia* Yamaguti, 1959, in which the testes are arranged in a triangular pattern external to the excretory canals. *Amazilolepis trinidadensis* is closest in morphology to *Woodlandia* Yamaguti, 1959, found in shags, *Phalacrocorax carbo*, in Asia, but clearly differs, as stated above, in having testes arranged in a transverse row between the osmoregulatory canals instead of in a triangular pattern, 1 poral and 2 antiporal, located lateral to the osmoregulatory canals; in having a compact, antiporal ovary instead of median; and

in host, *Woodlandia* being found in Pelicani-formes where *Amazilolepis* is the first species of Hymenolepididae to be reported from hummingbirds.

HOST: Copper-rumped hummingbird, *Amazilia tobaci*.

LOCALITY: Port-of-Spain, Trinidad, West Indies.

HABITAT: Small intestine.

HOLOTYPE: USNM Helm. Coll. No. 81858.

PARATYPES: USNM Helm. Coll. No. 81859.

ETYMOLOGY: Named for genus of host and its country of collection.

### Discussion

Three species of cestodes have been reported from the Trochilidae, birds that occur only in the New World. All 3 are in the Dilepididae: *Anonchotaenia trochili* Fuhrmann, 1908; *Anomaloporus hesperiphonae* Vogt et Davis, 1953; and *Arostellina reticulata* Neiland, 1955 (Schmidt, 1986). It is interesting to note that cestodes of these 3 genera previously found in hummingbirds, as well as *Amazilolepis*, lack rostella, but belong to families in which an armed rostellum is usual. Of the many of the nearly 100 hummingbirds representing many genera and species

from South, Central, and North America dissected by 1 of us (G.D.S.), this is the first time tapeworms have been found. The stomach of nearly every bird examined contained tiny spiders, fruit flies, wasps, and other insects. These arthropods probably were attracted to the flowers or each other, and mainly have mouth parts incapable of ingesting bird feces. The limited possibility of these insects to ingest tapeworm oncospheres probably accounts for the paucity of cestodes in this large family of about 320 species of birds.

#### **Acknowledgments**

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#### **Literature Cited**

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